Arctic Product Family
Quick Start Guide

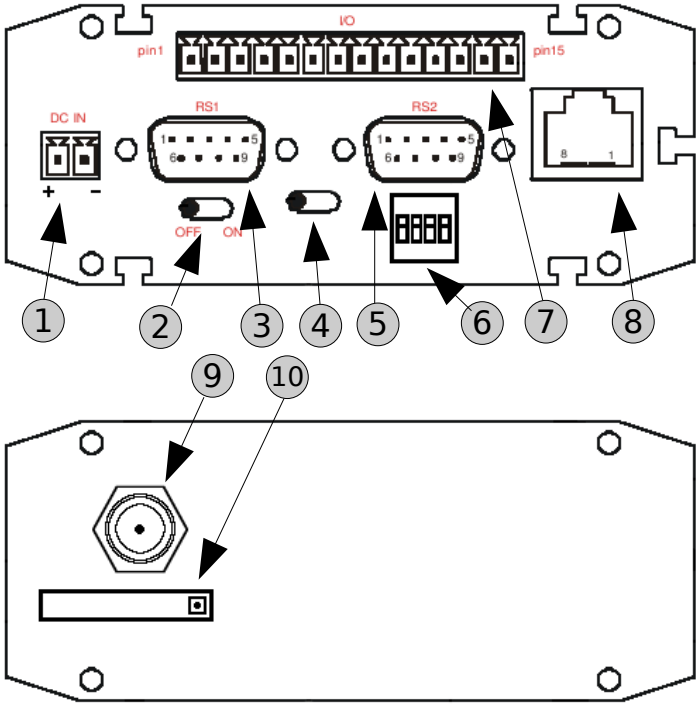
User Manuals

User manuals and other documentation for Arctic product family are available at:	
-Arctic GPRS Router	http://www.violasystems.com/docs/router/
-Arctic GPRS Gateway	http://www.violasystems.com/docs/gateway/
-Arctic IEC-104 Gateway	http://www.violasystems.com/docs/iec104/
-Arctic Modbus Gateway	http://www.violasystems.com/docs/modbus/

Overview

This document is a short description how to power up Arctic series (firmware 4.x.x and 5.x.x) product and how to get it operational. For further documentation consult product User Manuals.

Physical connections and switches



Connector side:

1. Power supply connector
2. Power switch
3. Console/application serial port (RS1)
4. Console/application port selection switch
5. Application serial port (RS2)
6. DIP switches (RS2 hardware settings)
7. I/O connector
8. Ethernet connector

Antenna side:

9. Antenna connector (FME)
10. SIM card slot

NOTE: Some Arctic models can have different amount of connectors than listed here.

Installing SIM card

NOTE: If you have PIN code querying enabled on your SIM card, do not install the card before setting the code. The SIM card could lock up if done otherwise. SIM card is not included.

1. Power off the Arctic. It is recommended to turn power off while installing/removing the SIM card.
2. Push the yellow button in the SIM card slot to eject the SIM card tray.
3. Insert the SIM card to the tray and push the SIM card tray firmly and carefully back to its holder.

Connecting Arctic to Ethernet network

There are two different ways to configure the network settings, serial port or web access. The recommended method is using web access.

Method 1: Setting IP Address Using Web Browser (Recommended)

1. Connect the cross-over Ethernet cable between the Arctic and your computer.
2. Configure your computer to use the same IP address space than Arctic (laptop IP for example 10.10.10.11 with netmask 255.0.0.0). Check the connection to Arctic with ping utility.
3. Connect to the Arctic using your web browser. The default IP address of Arctic is 10.10.10.10 (netmask 255.0.0.0).
4. From the initial page click `Start configurator` and enter login information in the following page. Username is `root` and by default no password is set (just leave the field empty).
5. Navigate to `Network` page (1) and from there to `Ethernet` subpage. (2)
6. Enter the IP address and other network settings of your choice and click `Apply` (3) and then `Commit` (4) to store the settings.
7. `Reboot` the Arctic for the settings to take effect.

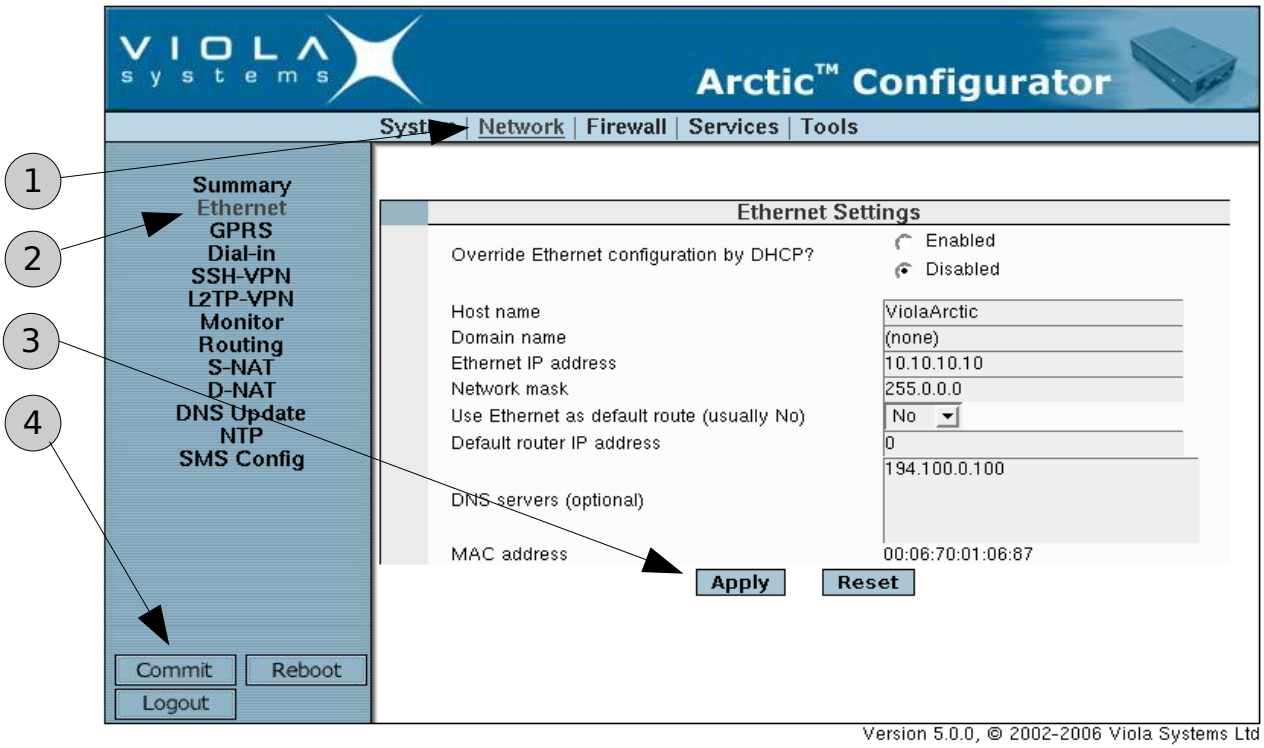


Figure 1: Arctic™ Configurator screen, Ethernet settings

NOTE: You could check the current network status from the Network-->Summary subpage.

Method 2: Using serial console

1. Switch off the Arctic if necessary
2. Connect a null modem serial cable to console serial connector (RS1)
3. Open a terminal connection to Arctic using the following serial communication settings: `19200-8-N-1, no flow control`.
4. Switch on the Arctic by turning the power switch to ON position
5. Wait for the text "`Hit any key to stop autoboot`" and press enter before the counter goes to zero. If you missed it, just reboot and try again.
6. You are now supposed to be on the PPCBoot console. Figure 2 shows how it looks like.
7. Now enter the following commands to the console, parameter fields substituted with your parameters (see figure 2 for example):

   `setenv ipaddr your_IP_address`

   `setenv netmask your_netmask`

   `setenv gatewayip 0 (By default, GPRS or SSH-VPN is defined as default Gateway)`
8. Check that the configuration was entered properly by issuing command `printenv`.
9. If everything is correct, save the setting with command `savenv`.
10. Reboot the Arctic for the settings to take effect.

```
PPCBoot 1.1.6 (Apr 14 2005 - 18:44:18)
Viola Systems Arctic Board

CPU:     MOTOROLA Coldfire MCF5272
Board:   Viola Systems Oy Arctic Board
         http://www.violasystems.com/
DRAM:    32 MB
FLASH:   8 MB
In:      serial
Out:     serial
Err:     serial
Net:     00:06:70:01:02:23
Hit any key to stop autoboot:  0
arctic> setenv ipaddr 192.168.0.50
arctic> setenv netmask 255.255.0.0
arctic> setenv gatewayip 0
arctic> printenv
baudrate=19200
loadaddr=0x20000
...
ipaddr=192.168.0.50
netmask=255.255.0.0
gatewayip=0

Environment size: 407/4092 bytes
Disabling watchdog
arctic> savenv
Saving Enviroment to EEPROM...
arctic>
```

Figure 2. Network parameter configuration using serial console

GPRS Network Settings

1. Login to the Arctic Configurator (for instructions, see page 2).
2. Navigate to `Network` page (1) and from there navigate to `GPRS` subpage. (2)
3. Set access point name appropriately (usually `INTERNET`). (3)
4. Set GPRS network username and password (4) appropriately if your GPRS service requires authentication. Enable "Default Route" setting.
5. Optionally set the PIN code, PPP idle timeout and ICMP Echo settings (Network-->Monitor menu) to meet your requirements.
   - If your SIM card has PIN code set, type the code to the PIN code field.
   - PPP idle timeout defines the time in seconds how ofter Arctic resets the GPRS connection if the connection is idle.
6. Finally click `Apply` and then `Commit` (5) to store the settings.
7. `Reboot` the Arctic for the settings to take effect.

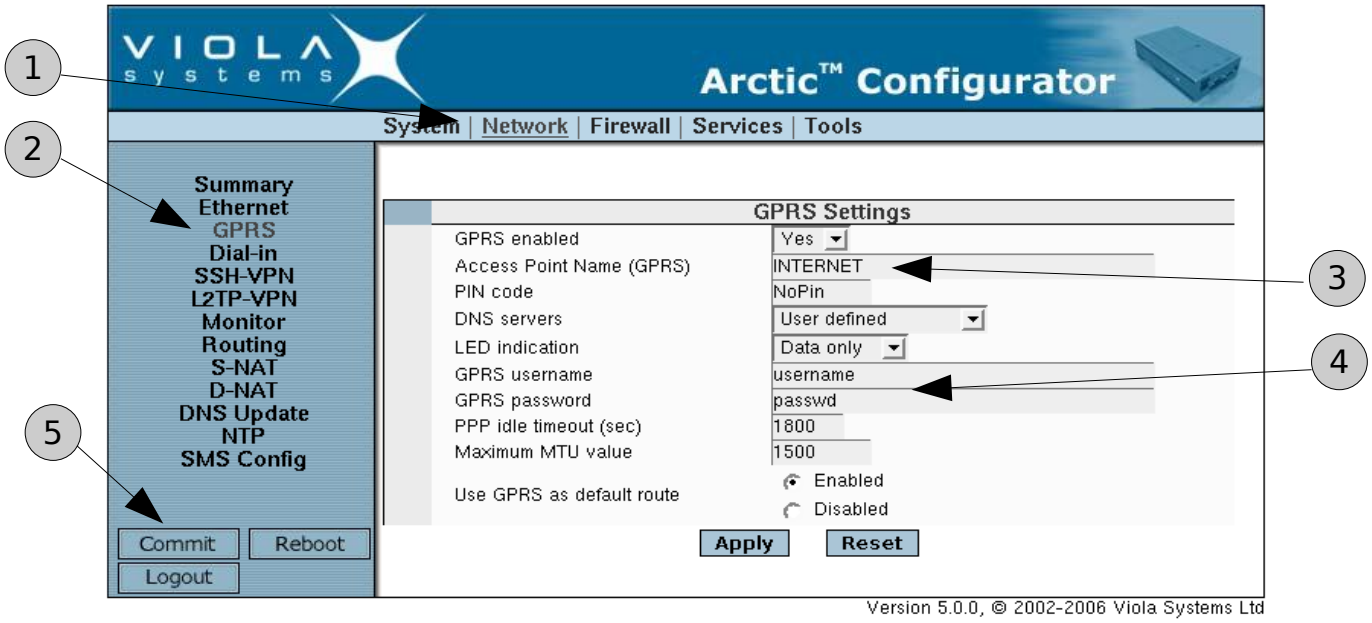


Figure 3: GPRS Network Settings

Using Arctic GPRS Router as Wireless Access Point

1. Set your Ethernet device to use the IP address of the Arctic as its default gateway.
2. Check that the IP address of your Ethernet device belongs to the same network as the Arctic.
3. Check GPRS Settings. Note that **"Default Route"** needs to be enabled in GPRS settings.

Final words

In order to get better understanding about the Arctic product, it is recommended to read the User Manual, as it will help you during the installation process. Building more complex networking schemes with Arctic requires more knowledge about networking, especially routing.